P.a SEROVA, F. G.
1948.

2

Faraday effect in a relativistic electron gas. F. G. Serova (Gorki Pedagog. Inst.). *Zhur. Eksptl. Teoret. Fiz.* 18, 780–4(1948).—By soln. of the Dirac equation for an electron moving in a homogeneous magnetic field, the dependence of the magnetic moment of the electron on its velocity, and, further, the magnetic susceptibility of the electron gas, and the magnetic rotation of the plane of polarization (Faraday effect), are calcd. The rotation is shown to be always diamagnetic, even though the electron gas is paramagnetic. The nonrelativistic expression for the magnetic rotatory power is accurate up to very high electron velocities. N. Thon

L 40202-66 EWT(l)/EWT(m)/EWP(w)/T/EWP(t)/ETI IJP(c) AT/JD/WW

ACC NR: AP6007346 SOURCE CODE: UR/0126/66/021/002/0161/0165

AUTHOR: Serova, F. G.

ORG: Gorkiy Pedagogical Institute im. M. Gorkiy (Gor'kovskiy pedinstitut)

TITLE: Theory of thermal conductivity of single valence metals

SOURCE: Fizika metallov i metallovedeniye, v. 21, no. 2, 1966, 161-165

TOPIC TAGS: thermal conductivity, phonon interaction, electron interaction, metal property, Debye temperature

ABSTRACT: The thermal conductivity of single valence metals for temperatures above the Debye temperature is theoretically calculated, including the effects of electron entrainment by phonons. The derivation is based on the simultaneous solution of the kinetic equations for the electron and phonon distribution functions (E. H. Sondheimer. Proc. Roy. Soc. 1956, A234, 391). After considerable manipulation and simplification the thermal conductivity for the case of small electric fields and temperature gradients is derived as the sum of three terms

$$\varkappa_e = \frac{2}{9}\frac{mk_0^2 Tl\xi}{\hbar^3};$$

$$\varkappa_f = \frac{k_0^4 \Theta^3 \langle \tau \rangle}{18\pi^3 \hbar^3 s};$$

UDC: 539.292:536.01

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L 40302-66

ACC NR: AP6007346

$$\varkappa_y = -\frac{2}{3}\frac{k_0^2 T m^* s^3 v(\xi)\tau_{eff}}{\hbar^3}$$

(normal nomenclature) where $\varkappa_e$, $\varkappa_f$, and $\varkappa_y$ are the contributions of the electron conductivity, the phonon conductivity, and the conductivity due to phonon entrainment of electrons respectively. It is shown that the mutual electron and phonon entrainment has practically no effect on the overall thermal conductivity even at high temperatures so that the expression for the electron thermal conductivity can be used with sufficient accuracy to represent the total conductivity. The author thanks Professor A. G. Samoylovich for reviewing the results. Orig. art. has: 25 formulas.

SUB CODE: 20, 11 / SUBM DATE: 20Jan65/ ORIG REF: 003/ OTH REF: 004

Card 2/2 mcr

AUTHORS: Popil'skiy, R. Ya., Serova, G. A. SOV/131-58-9-6/11

TITLE: On Some Destruction Processes of Highly Refractory Materials Under the Influence of High Temperature and of a Variable Gas Medium (O nekotorykh protsessakh razrusheniya vysokoogneupornykh materialov pri vozdeystvii vysokikh temperatur i peremennoy gazovoy sredy)

PERIODICAL: Ogneupory, 1958, Nr 9, pp. 421 - 424 (USSR)

ABSTRACT: This paper gives an account of the findings concerning the stability of highly refractory materials in the checker chamber of a plant. The checker works in 2 cycles which alternate every two minutes. In the first cycle, the checker chamber is heated by the combustion of methane up to a temperature of 1750 - 1800°, whereat an oxidation medium is existing. In the second cycle methane, hydrogen, and carbon act in a regeneration medium the temperature falling to 1500-1600°, in the coldest part of the checker chamber at cycle change even down to 1500-1300°. The following refractories were tested in a small testing plant:1) refractories on the basis of recrystallized alumina comprising corundum, both pure and with additions, 2) refractories

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from zirconium dioxide stabilized by CaO and CaO + MgO, 3) refractories from beryllium oxide, both pure and with additions, 4) refractories on the basis of silicon carbide. All tested materials on the basis of pure oxides proved to be insufficiently stable, as is seen from figures 1,2,and 3. Only refractories on the basis of carborundum gave satisfactory results (Figs 4,5). It was found that the carborundum materials which are stable against the conditions of regeneration are to be regarded as suitable for the checker chamber. A definite selection of the most proper type of carborundum checkers will not be possible before extended investigations are accomplished. There are 5 figures and 3 references, 2 of which are Soviet.

ASSOCIATION: Khimiko-tekhnologicheskiy institut im.Mendeleyeva (Institute of Chemical Technology imeni Mendeleyev)

15(2)
AUTHORS: Popil'skiy, R. Ya., Sereva, G. A. SOV/156-59-2-44/48

TITLE: The Action of Some Admixtures During the Production of Cristobalites From Quartz-sand (O deystvii nekotorykh dobavok pri polucheniі kristobalita iz kvartsevogo peska)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya tekhnologiya, 1959, Nr 2, pp 390-393 (USSR)

ABSTRACT: According to (Refs 1-3) cristobalite is used as a filling agent for gipsum moulds for the precision casting of non-ferrous metals and their alloys. Cristobalite is not technically produced in the USSR. The works of Soviet authors are discussed (Refs 4-6), which partly propose methods, the technical realization of which is too expensive, and partly operated with the sole addition of soda, which resulted in a loosening of the sand formed into briquettes, and the formation of tridymite. The result of the addition of FeO and CaO in the proportion 1 : 4, as it is used for the production of dinas-stones, is being investigated in this work. It was established during the tests that a small addition of FeO + CaO (0.5 - 1%) increases the strength of the briquettes. Higher additions reduce the yield of cristobalite (Figure), owing to the increase of the glazing

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phase, but first of all through a reduction of the effect of the sodium-ion added as a mineralizer. When adding 1% Na_2CO_3 and 1% MgO + CaO, a product with a content of 85 - 90% cristobalite was obtained. The burning should be carried out at temperatures of 1300 - 1400 degrees and should be as short as possible, in order to prevent the transformation of cristobalite into tridymite. There are 1 figure, 1 table, and 9 references, 6 of which are Soviet.

PRESENTED BY: Kafedra keramiki i ogneuporov Moskovskogo khimiko-tekhnologicheskogo instituta im. D. I. Mendeleyeva (Chair for Ceramics and Refractories Moscow Institute of Chemical Technology imeni D. I. Mendeleyev)

SUBMITTED: December 31, 1958

YELISEYEVA, A.M., doktor med.nauk; SEROVA, G.A.; LIRINA, T.B.

Treatment of stenocardia with nitranol. Vrach.delo no.7:755 Jl '59. (MIRA 12:12)

1. Kafedra fakul'tetskoy terapii (zav. - doktor med.nauk A.M. Yeliseyeva) Ivanovskogo meditsinskogo instituta i Olbastnaya klinicheskaya bol'nitsa.

(ANGINA PECTORIS) (ETHANOL)

Poplitskiy, R. Ya., Savova, G. A. SOV/131-59-10-7/10

Production of Cristobalite From Quartz Sand for Commercial Purposes

Ogneupory, 1959, Nr 10, pp 462-470 (USSR)

The problem of producing cristobalite from quartz sand has not yet been solved in the Soviet Union. Only Kaynarskiy succeeded in producing highly aluminous Dinas bricks from pure crystalline quartzites which contained cristobalite up to 60-70%. Experiments made by the authors have shown that cristobalite is produced most simply from chalcedony. The authors used here Ch-OO quartz sand of the Lyuberetsy deposit whose chemical composition is given. The quantity of cristobalite in baked samples was ascertained by the dilatometric method and by determination of the specific weight. Table [illegible] shows the conversion of Lyubertsy quartz sand into cristobalite by heating the former up to at least 1600?. By adding Na_2CO_3, this conversion is attained at 1400° as shown in table 2. By briquetting the samples and heating them up to [illegible]00°, a cristobalite content of more than 90% is attained.

Table 3 shows the properties of these briquettes at burning temperatures of from 1200 to 1400° as well as with various additions. Table 4 indicates the cristobalite content of the briquettes after their baking at 1400°, and figure 1 shows their microstructure. Radiographic analyses were made by S. P. Shmidt-Fogelevich at the Vsesoyuznyy institut ogneuporov (All-Union Institute for Refractories) (Footnote). Table 5 indicates the phase state of the briquettes after lengthy burning at 1400°. Figure 2 shows the dependence of the cristobalite content of the briquettes on the quantity of additions. Conclusions: The principles underlying the production of commercial cristobalite from quartz sand are indicated. By adding Na_2CO_3, the time and temperature of quartz-sand burning may be reduced to 1350-1400°. The burning of previously briquetted quartz sand proved to be most favorable, but it should be taken into account that it is necessary to maintain the material within the temperature range 1300-1400° only as briefly as possible in order to prevent transition of cristobalite into tridymite. At a

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favorable composition of the mineralizer and short stay within the range of final temperatures, a commercial product with a cristobalite content of 85-90% may be obtained. It is easily baked and crushed, and exhibits considerable porosity. There are 2 figures, 5 tables, and 25 references, 19 of which are Soviet.

ASSOCIATION: Khimiko-tekhnologicheskiy institut im. Mendeleyeva (Institute of Chemical Technology imeni Mendeleyev)

S/123/61/000/005/011/017
A004/A104

AUTHORS: Popil'skiy, R.Ya., Serova, G.A.

TITLE: On some properties of gypsum-silicic molding materials for the precision casting of non-ferrous metals

PERIODICAL: Referativnyy zhurnal Mashinostroyeniye, no. 5, 1961, 24, abstract 5G181 ("Tr. Mosk. khim.-tekhnol. in-ta im. D.I. Mendeleyeva", 1959, no. 27, 247 - 259)

TEXT: The authors have determined the dilatometric characteristics of gypsum - silicic mixtures during heating up to 800°C and subsequent cooling down to room temperature. The mixtures consisted of the high-strength 350 gypsum of the Kuybyshev Plant or grade 500 (GDR) and silicic fillers: quartz, ground Dinas, cristobalite. Cristobalite at 220 - 260°C effects an intensive expansion resulting from the transformation of the β - into the α - modification. At 60-80% cristobalite and 40-20% grade 350 gypsum the shrinkage of gypsum does not essentially affect the course of the dilatometric curves. The maximum expansion of the mixture at 700 - 800°C is 1.5 - 1.6%, with 50 - 60% gypsum this value decreases to 1.12 - 1.16%. Mixtures of 30% grade 350 gypsum and 70% high-silicic

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On some properties of gypsum-silicic molding

S/123/61/000/005/011/017
A004/A104

Dinas containing 60-70% cristobalite at 800°C yielded a maximum expansion of 1.08%. In quartz-gypsum mixtures the quartz transformation effect from the β-to the α-modification appears at 550-570°C. The value of total expansion at 800°C amounts to 1.1%. The German gypsum has a higher shrinkage. The course of the dilatometric curves during cooling is more favorable for castings based on gypsum cristobalite mixtures. The strength of gypsum-cristobalite and gypsum quartz mixtures is rather low owing to the modification transformations. To increase the strength 1-3% low-melting boron-lead-silicate glass of the following composition is added: 70% - PbO, 20% - B_2O_3, 10% - SiO_2. There are 3 figures, 2 tables and 10 references.

M. Anuchina

[Abstracter's note: Complete translation]

Card 2/2

SEROVA, G. A., Cand Tech Sci (diss) -- "The development of a method and investigation of a process of producing crystobalite as filler for gypsum forms in precision casting". Moscow, 1960. 19 pp (Min Higher and Inter Spec Educ RSFSR, Moscow Order of Lenin Chem-Tech Inst im D. I. Mendeleyev), 180 copies (KL, No 14, 1960, 133)

89691
S/131/61/000/003/001/001
B105/B206

AUTHORS: Vinogradova, L. V., Makarova, T. S., Rutman, D. S., Poluboyarinov, D. N., Popil'skiy, R. Ya., Serova, G. A.

TITLE: Manufacture of sintered ceramics from magnesium oxide

PERIODICAL: Ogneupory, no. 3, 1961, 123-124

TEXT: This article describes the process of manufacturing thin-walled, sintered crucibles and shield tubes for thermocouples from magnesium oxide. This process was elaborated at the Podol'skiy zavod ogneupornykh izdeliy (Podol'sk Plant for Refractories) jointly with the kafedra keramiki (Department of Ceramics) of the Khimiko-tekhnologicheskiy institut im. Mendeleyeva (Institute of Chemical Technology imeni Mendeleyev). The crucibles are intended for metal smelting. The initial material was commercial magnesium oxide with a content of 98% MgO, the preparation of which (firing temperature and mode of crushing) was worked out according to previous studies. Commercial magnesium in powdery form is first fired in molds at 1300°C and then finely ground in a vibrating mill by means of steel balls. The powder was plasticized by

means of paraffin with an addition of oleic acid. The shaping of crucibles and shield tubes for thermocouples from magnesium oxide by the "freezing-on" method permits the manufacture of products with a wall thickness of 5-0.3 mm. After partial burning out of the paraffin at a temperature of about 200°C, the products were fired in a regenerative medium (H_2) at 1700°C in an electric furnace with a molybdenum coil.

The firing time was 5 to 6 hr (2 hr in the high-temperature zone). After sintering, the average weight by volume of the products was 3.36 to 3.38 g/cm^3, and their apparent porosity 0 to 0.4 %; the white products showed good translucence. Pyrometric ceramics produced from magnesium oxide in the form of shield tuves for thermocouples and capillary tubes, permits temperature measurement up to more than 2000°C. The relatively simply process permits the manufacture of products for use at high temperatures, the waste being very small. There are 1 figure and 1 Soviet-bloc reference.

ASSN: Podol'sk Plant for Refractories - Vinogradova, L. V., Makarova, T. S., Rutman, D. S.

Card 2/2 Inst. Chem. Technology im Mendeleyer - Poluboyarinov, D. N., Popil'skiy, R. Ya., Serova, G. A.

BALKEVICH, V.L.; SEROVA, G.A.

Methods of evaluating the structure of carborundum heaters. Trudy MKHTI no.37:180-184 '62. (MIRA 16:12)

ACCESSION NR: AP4013187 S/0131/64/000/002/0082/0089

AUTHOR: Poluboyarinov, D. N.; Bashkatov, V. A.; Serova, G. A.; Golubeva, Ye. V.; Shlemin, A. V.

TITLE: Testing of highly refractory insulation materials in lithium vapors at high temperatures in a vacuum

SOURCE: Ogneupory*, no. 2, 1964, 82-89

TOPIC TAGS: insulation, insulation material, insulation material testing, lithium vapor, refractory insulation material, high temperature material testing, insulatin material alkali metal resistance

ABSTRACT: In respect to the effect of alkali metals on refractory materials at high temperatures, tests have been conducted on the resistance of different materials to liquid lithium and ionized lithium vapors in a vacuum. Aluminum oxide, calcium oxide, magensium oxide (pure and with Al_2O_3 admixtures), zirconium dioxide and certain other high-melting materials (zircon, calcium zirconate, silicon nitride, silicon carbide on a vitreous bond, silicon carbide on β-carborundum and silicon nitride bonds, as well as a material with a boron nitride base) served as base materials. Samples of corundum, zirconium dioxide, magnesium oxide, and cal-

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ACCESSION NR: AP4013187

cium oxide were prepared using G-0 technical alumina (98.7% Al_2O_3), white electrosmelted corundum No. 36 and 280 (95.5% Al_2O_3), smelted technical ZrO_2 stabilized by calcium oxide (91.16% ZrO_2, 6.49% CaO), monoclinic ZrO_2 (98.02% ZrO_2), technical magnesium oxide (98.7% MgO), and calcium carbonate. Samples were prepared in solid-sintered and granular-porous pieces. The basic results were: (1) corundum, zirconium dioxide, zircon, calcium zirconate, and silicon nitride were affected considerably by lithium, particularly in contact with melted lithium; (2) magnesium oxide and calcium oxide showed greater chemical stability; (3) the chemical stability of magnesium oxide with Al_2O_3 admixtures was noticeably less than that of pure magnesium oxide; (4) the carborundum samples on a bond of β-carborundum did not possess the required electroinsulating properties; (5) boron nitride-base samples showed chemical and thermal stability. It was concluded that refractory materials of pure aluminum oxide and pure zirconium dioxide, zircon, calcium zirconate and silicon nitride are not serviceable because of their low chemical stability; however, boron nitride, calcium oxide, and magnesium oxide may be used as insulators. Orig. art. has: 8 figures, 2 tables.

Card 2/3

ACCESSION NR: AP4013187

ASSOCIATION: Khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva (Institute of Chemical Technology)

SUBMITTED: 00	DATE ACQ: 02Mar64	ENCL: 00
SUB CODE: MA, CH	NO REF SOV: 002	OTHER: 003

Card 3/3

ACCESSION NR: AP4040466 S/0131/64/000/006/0281/0284

AUTHOR: Guzman, I. Ya.; Serova, G. A.

TITLE: Porous magnesium oxide refractories

SOURCE: Ogneupory*, no. 6, 1964, 281-284

TOPIC TAGS: magnesium oxide, magnesia, magnesia refractory, periclase refractory, porous refractory, combustible additive method, periclase

ABSTRACT: The valuable technical characteristics of magnesium oxide prompted the study of the physical properties of porous magnesium oxide products as compared with the properties of dense magnesium oxide refractories. A relatively strong, permeable, and highly refractory material was obtained with technical grade magnesium oxide (98.5% MgO), with 30—60% porosity. The properties of the porous products can be controlled over a wide range by varying the grain size of the filler, the filler to binder ratio, content and

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L 41370-66 EWP(e)/EWT(m)/EWP(t)/ETI IJP(c) JD/WH

ACC NR: AT6022495 SOURCE CODE: UR/2539/64/000/045/0091/0095

43
B+1

AUTHOR: Lukin, Ye. S.; Serova, G. A.

ORG: none

TITLE: Certain thermomechanical properties of refractories from fused magnesium oxide

SOURCE: Moscow. Khimiko-tekhnologicheskiy institut. Trudy, no. 45, 1964. Issledovaniya v oblasti khimii i tekhnologii silikatov (Studies in the field of silicate chemistry and technology), 91-95

TOPIC TAGS: magnesium oxide, thermomechanical property, refractory

ABSTRACT: Some physicomechanical properties of refractories prepared from fused magnesium oxide of various grain distributions containing ~99% MgO were studied at room temperature and in the range of 1000-1400°; the temperature of the start of softening of these refractories under load and their thermal stability were determined. The effect of the addition of various amounts of Al_2O_3 was also investigated. It was found that Al_2O_3 admixtures increase the thermal stability of fused MgO refractories; they decrease the strength of the refractories at room temperature, but at 1000-1400°, the admixtures in amounts up to 8% strengthen the material. The optimum refractories from the standpoint of strength in the heated state are those containing 2 and 8% Al_2O_3. Orig. art. has: 5 figures and 2 tables.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 008/ OTH REF: 003

Card 1/1

L 10698-65 EWP(e)/EPA(s)-2/EWT(m)/EPF(n)-2/T/EPA(bb)-2/EWP(b) Pt-10/Pu-4
AFMD(t) JD/WW/JG/WH

ACCESSION NR: AP4047378 S/0294/64/002/005/0736/0741

AUTHORS: Lukin, Ye. S.; Serova, G. A. 15 B

TITLE: On several properties of refractories from calcium oxide

SOURCE: Teplofizika vy*sokikh temperatur, v. 2, no. 5, 1964, 736-741

TOPIC TAGS: ceramic material, refractory material, material strength

ABSTRACT: The properties of refractory materials from CaO were investigated at high temperatures, including tests of their stability under the action of alkaline metal vapor. The stock test material was composed of CaO and $CaCO_3$ in 55.20 and 43.37% respective concentrations with additional trace elements. The influence of the following factors upon the caking tendency of CaO was studied: 1) the temperatures of calcination of the base material; 2) the quantities of TiO_2 input, 3) temperatures and endurance lengths for final calcination of refractories, and 4) gas atmosphere of calcination. Tables are presented showing the caking characteristics of the material with heating at various temperatures for varying lengths of time in both cryptolite and vacuum furnaces. Deformation and resistance characteristics were also tabulated at various temperatures as were dilation character-

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L 15698-65

ACCESSION NR: AP4047378

istics. Material fabric was investigated by x-ray after exposure to lithium fumes. Results of the fume tests include a roentgen rotation diagram and a plot of surface temperature drop during fume exposure. Results indicate satisfactory chemical stability under fume actior, though CaO samples showed poor thermal durability under sharp temperature fluctuations. CaO ceramic pieces are recommended for use at constant high temperatures and in CO_2, H_2O, or in alkaline metal vapors. Orig. art. has: 2 figures and 5 tables.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva (Moscow Chemico-technical Institute)

SUBMITTED: 21Dec63 ENCL: 00

SUB CODE: MT NO REF SOV: 007 OTHER: 011

Card 2/2

(MIRA 18:1)

ACC NR: AT6036927 SOURCE CODE: UR/0000/66/000/000/0054/0062

AUTHORS: Serova, G. A.; Komissarova, N. M.; Vinogradova, L. V.; Makarova, T. S.

ORG: none

TITLE: Periclase refractories based on technical magnesium oxide

SOURCE: Nauchno-tekhnicheskoye obshchestvo chernoy metallurgii. Moskovskoye pravleniye. Vysokoogneupornyye materialy (Highly refractory materials), Moscow, Izd-vo Metallurgiya, 1966, 54-62

TOPIC TAGS: magnesium oxide, refractory oxide, high temperature ceramic material, refractory product, aluminum oxide

ABSTRACT: Results are reported from the study of production and properties of periclase refractories made of technical 98% MgO in the form of grains of sintered briquets. Sintered briquetting material was crushed, freed of iron impurities, and sieved. A fraction of < 0.5 mm was ground to obtain grain size < 0.06 mm, which was pressed into cylinders 36 mm in diameter and 50 mm high. The specimens were fired at 1730C for 1 or 4 hours. The porosity of the samples was 17—19%; they maintained a constant volume at 1800C and possessed a higher thermal stability than products made of sintered MgO. Introducing $\sim 8\%$ of Al_2O_3 increased considerably the thermal stability (two to four times the number of thermal cycles). These

Card 1/2

SEROVA, G. F.

Polarographic study of the composition and stability of complex ions for small concentrations of the complexing agent. The halide and thiocyanate complexes of cadmium. Ya. I. Tur'yan and G. F. Serova (State Univ., Kishinev). *Zhur. Neorg. Khim.* 2, 336–42(1957).—It was shown mathematically that the half-wave potential can be used for the precise detn. of the instability const. of complex compds. This conclusion was checked by carrying out a polarographic study of the reaction of Cd with small concns. of complexing agents (KCl, KI, KCNS, concns. 0.001–0.1 mole). From the exptl. data, K was calcd. to be 4.0×10^{-4} for $[CdI]^+$, 3.0×10^{-3} for $[CdCl]^+$ and $[CdCNS]^+$. The instability consts. were also detd. for $[CdI_2]$ ($K_1 = 2.2 \times 10^{-4}$) and for $[CdI_3]^-$ ($K_2 = 2.3 \times 10^{-5}$). J. Rovtar Leach

4EH 7 6

TUR'YAN, Ya.I.; SEROVA, G.F.

Polarization in the polarography of the pyridine complexes of nickel and cobalt [with summary in English]. Zhur.fiz.khim. 31 no.9:1976-1982 S '57. (MIRA 11:1)

1.Kishinevskiy gosudarstvennyy universitet.
(Nickel compounds) (Polarography) (Cobalt compound)

76-10-5/34

AUTHORS: Tur'yan, Ya.I., Serova, G.F.

TITLE: A Polarographic Investigation of the Composition and the Instability Constants of Pyridine Complexes of Nickel (Polyarograficheskoye issledovaniye sostava i konstant nestoykosti piridinovykh kompleksov nikelya)

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1957, Vol. 31, Nr 10, pp. 2200-2205 (USSR)

ABSTRACT: The results of the former paper of the authors in Zhurnal Fizicheskoy Khimii, 1956, 31, pp. 1976, on the basis of 0,1 and M KNO_3 without gelatine are exploited here for the determination of the composition and the instability constants of the pyridine complexes of nickel. The measuring temperature was $25^{\circ} \pm 0{,}3^{\circ}$ C. The here found relation between the potential of the half-wave ($\varphi^1/2$) and the logarithm of the complexformer (pyridine) concentration is a curve, a fact which proves the simultaneous electro-reconstruction of some types of the complex ion as well as of the simple (hydration) nickel ions. For the determination of the composition of complex ions and of the corresponding instability constants two methods were applied here, one of Deford and

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5 (1)
AUTHORS: [illegible]ryan, Ya. I., Gorova, G. F. SOV/20-125-3-26/63

TITLE: Polarographic Kinetic Currents Caused by the Retarded Formation of Rhodanic Complexes of Nickel (Polyarograficheskiye kineticheskiye toki, obuslovlennyye zamedlennym obrazovaniyem rodanistykh kompleksov nikelya)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 3, pp 595-598 (USSR)

ABSTRACT: In order to find out the nature of the three waves of the rhodanic complexes of nickel (which was investigated in previous research — — Ref 1) the authors investigated the dependence of the height of the waves at $C^{o}_{Ni^{2+}}$ = const (0.110 mol/l) on the concentration of KCNS (μ = 1:KCNS + KNO_3) and also on the concentration of nickel at C_{CNS^-} = const (12.6 mmol/l). The capillary tube has the characteristic $m^{2/3}t^{1/6}$ = 1.81 $mg^{2/3}sec^{-1/2}$ (t = 2.4 sec). i_k and $\sum i_u$ denote the kinetic currents, and i_d the diffusion current.

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Polarographic Kinetic Currents Caused by the Retarded Formation of Rhodanic Complexes of Nickel

SOV/20-125-3-36/63

The following fact results from a previous paper (Ref 2) in which the constants of the instability of rhodanic complexes of nickel were determined. In the range of concentration of KCNS under investigation, only the ions Ni^{2+} and $[NiCNS]^{+}$ take part, in essential, in the diffusion to the electrode. The authors assume the following schemes of the electrode processes which determine the maximum current:

first wave:

$$Ni^{2+} \xrightarrow[k_s]{diff} Ni^{2+} \quad +CNS^{-} \underset{k_2}{\overset{k_1}{\rightleftharpoons}} [NiCNS]^{+} \quad +CNS^{-} \xrightarrow{k_3} [Ni(CNS)_2]$$

$$[NiCNS]^{+} \xrightarrow[k_c]{diff}$$

first + second wave:

$$Ni^{2+} \xrightarrow[k_s]{diff} Ni^{2+} \quad +CNS^{-} \xrightarrow{k_1} [NiCNS]^{+} \xrightarrow{reduction}$$

$$[NiCNS]^{+} \xrightarrow[k_c]{diff}$$

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Polarographic Kinetic Currents Caused by the Retarded Formation of Rhodanic Complexes of Nickel

SOV/20-125-3-[illegible]

first + second + third wave:

$$Ni^{2+} \xrightarrow[k_a]{\text{diff}} Ni^{2+} \xrightarrow{\text{reduction}}$$

$$[NiCNS]^{+} \xrightarrow[k_c]{\text{diff}} [NiCNS]^{+} \xrightarrow{\text{reduction}}$$

The total height i_d of the wave must be determined by the diffusion velocity which was observed also experimentally. The equations which describe the dependence of the kinetic currents i_k and $\sum i_k$ on C_{CNS^-} are found according to the approximate theory of R. Brdička and K. Wiesner (Ref 1). The constant of the rate of addition of CNS^- to $[NiCNS]^+$ is considerably higher than the constant of the rate of addition of the ion to the ion Ni^{2+}. A formula is then given for i_k as a function of C^0_l. According to the computations of the present paper, the kinetic current and C^0_l are proportional,

Card 3/4

Polarographic Kinetic Currents Caused by the Reversible SCV/20-[illegible]-3-36/[illegible]
Formation of Rhodanic Complexes of Nickel

which was observed also experimentally. The authors used also the more exact equations of J. Koutecky (Ref 1) for various diffusion coefficients. The equations derived for this case agree with the experimental results, i.e. also the more exact theory confirmed the assumed mechanism of the generation of the second kinetic wave. There are 3 figures, 1 table, and 10 references, 9 of which are Soviet.

ASSOCIATION: Kishinevskiy gosudarstvennyy universitet (Kishinev State University)

PRESENTED: December 10, 1958, by A. A. Grinberg, Academician

SUBMITTED: December 6, 1958

Card [illegible]

S/076/60/034/05/11/038
B010/B002

AUTHORS: Tur'yan, Ya. I., Serova, G. F.

TITLE: Polarographic Investigation of the Kinetics of the Formation of Thiocyanate Complex Compounds of Nickel in Aqueous Solution

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 5, pp. 1009-1017

TEXT: The authors investigated the dependence of the three steps of the polarogram of nickel - thiocyanate complex compounds (cf. Ref. 1) on the concentration of thiocyanate (at $c^{o}_{Ni^{2+}}$ = const = 0.140 millimole/l) (Table 1) and nickel (at c_{CNS} = const = 12.6 millimole/l) (Table 2). The results obtained are analyzed on the basis of the theory of kinetic polarographic currents. The experiments were performed at 25°C and with four different heights of the mercury reservoir. Table 3 represents the dependence of the limiting current on the height of the mercury reservoir. On the basis of data published by S. Fronaeus (Ref. 3) on the instability

constants of Ni^{2+}, $[NiCNS]^{+}$, $[Ni(CNS)_2]$, and $[Ni(CNS)_3]^{-}$ the authors calculated the content of each ion in the various solutions as dependent on the concentration of thiocyanate (Table 4). Three schemes of the electrodic processes show that the first step of the polarogram is related to the retarded formation of $Ni(CNS)_2$ (first scheme), whereas the second, larger step is related to the retarded formation of $[NiCNS]^{+}$ (second scheme), and the third (a diffusion step) is related to the electrical reduction of Ni^{2+} and $[NiCNS]^{+}$. With the help of the Brdička-Wiesner approximation theory the authors calculated the rate constants k_1 and k_3. k_1 was also calculated according to the more exact theory by Koutecky. It was taken into account that besides the Ni^{2+} ions also the $[NiCNS]^{+}$ ions participated in diffusion, and that the diffusion coefficients of these ions differ considerably. It is shown that the reaction rate constant of $[NiCNS]^{+} + CNS^{-}$ is considerably higher than that of $Ni^{2+} + CNS^{-}$. The $[NiCNS]^{+}$ ion is reduced at the potentials of the second polarogram step, which are more

positive than the potentials of the reduction of simple nickel ions, whereas at still more positive potentials of the first step a larger complex ion is reduced. In accordance with A. N. Frumkin and G. M. Florianovich (Ref 16) it is probably a complex of the anionic type. Budevskiy is also mentioned in the present paper. There are 5 figures, 5 tables, and 16 references: 5 Soviet, 6 Czech, 1 German, and 1 Swedish.

ASSOCIATION: Kishinevskiy gosudarstvennyy universitet (Kishinev State University)

SUBMITTED: June 28, 1958

MIGAL', P.K.; SEROVA, G.F.

Composition and stability of cadmium, lead, and zinc complexes with monoethanolamine in water-alcohol solutions. Zhur.neorg.khim. 7 no.7: 1601-1607 Jl '62. (MIRA 16:3)

1. Kishinevskiy gosudarstvennyy universitet.
(Cadmium compounds) (Lead compounds) (Zinc compounds)
(Alcohols)

MIGAL', P.K.; [illegible]

Polarographic study of [illegible] complexes of [illegible], zinc, and [illegible] in water-alcohol solutions. [illegible] Khim. 9 no.[illegible]

1. Kishinevskiy gosudarstvennyy universitet.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548130008-1"

[illegible], [illegible]

Polarographic study of the complex formation of cadmium with triethanolamine in water ethanol solutions. Zhur. neorg. khim. 10 no.3:615-618 Mr '65. (MIRA 18:7)

1. Kishinevskiy gosudarstvennyy institut.

MIGAL', P.K.; SEROVA, G.F.

Complex formation of cadmium with monoethanolamine in water-methanol solutions. Zhur.neorg.khim. 10 no.11:2513-2516 N '65. (MIRA 18:12)

1. Kafedra fizicheskoy khimii Kishinevskogo gosudarstvennogo universiteta. Submitted April 11, 1964.

SPIRIDONOVA, K.M.; SEROVA, G.N.

Semiautomatic stamping line at the Gorkiy Automobile Plant.
Trudy Stud. nauch. ob-va LIEI no.3:102-106 '59. (MIRA 16:10)

GONCHARENKO, V., tekhnicheskiy inspektor; SOLOV'YEV, L.; LEKONT, G.; SEROVA, I.; GOLUB', T.; MEDVEDEV, L.; PEKISHEV, V.; ANISIMOV, P.; ASTASHEVA, V.; DOSHCHATOV, V.; SERGEYEV, V.; YUOZAPAVICHYUS, L. [Juozapavicius, L.]; MISHURIS, M.; VORONTSOV, N.; BOCHKAREV, G.

Readers' conference by correspondence. Okhr. truda i sots. strakh. 5 no.5:31-32 My '62. (MIRA 15:5)

1. Tekhnicheskiye inspektora Omskogo oblastnogo soveta profsoyuzov (for Solov'yev, Lekont, Serova, Golub', Medvedev). 2. Tekhnicheskiy inspektor respublikanskogo soveta profsoyuzov, Turkmenskaya SSR (for Pekishev). 3. Zaveduyushchiy otdelom sotsial'nogo strakhovaniya Tyumenskogo oblastnogo soveta professional'nykh soyuzov (for Doshchatov). 5. Zaveduyushchiy yuridicheskoy konsul'tatsiyey Arkhangel'skogo soveta professional'nykh soyuzov (for Sergeyev). 6. Zaveduyushchiy otdelom okhrany truda Litovskogo respublikanskogo soveta professional'nykh soyuzov (for Yuozapavichyus). 7. Zaveduyushchiy yuridicheskoy konsul'tatsiyey Luganskogo oblastnogo soveta professional'nykh soyuzov (for Mishuris). 8. Zaveduyushchiy otdelom sotsial'nogo strakhovaniya Smolenskogo oblastnogo soveta professional'nykh soyuzov (for Vorontsov). 9. Predsedatel' komissii okhrany truda Barnaul'skogo motornogo zavoda (for Bochkarev).
(Industrial hygiene--Periodicals)

PHASE I BOOK EXPLOITATION SOV/3532

Serova, Irina Aleksandrovna, Vladimir Stepanovich Sluchevskiy, and Porfiriy Luk'yanovich Strelets

Proizvodstvo keramicheskikh p'yezoelementov; osnovy tekhnologii (Production of Ceramic Piezoids; Fundamentals of the Process) [Leningrad] Sudpromgiz, 1959. 98 p. 2,700 copies printed.

Resp. Ed.: V.A. Isupov; Ed.: A.G. Fomichev; Tech. Ed.: L.I. Levochkina.

PURPOSE: This booklet is intended for laboratory personnel and specialists engaged in the production of ferroelectric ceramic piezoids.

COVERAGE: The booklet reviews basic principles of the process of manufacturing ceramic piezoids from ferroelectric ceramic materials and briefly describes the most important equipment used. Designs of various apparatus and the flow sheet of the process are presented. The properties of certain ceramic ferroelectric materials and other solid solutions are presented and their chemical composition and characteristics analyzed. The preparation of ceramic material from barium and calcium titanate is described. Methods of forming ceramic piezoids under

Card 1/5

AVAILABLE: Library of Congress

Card 5/5

TM/mas
5-23-60

9,2180 (1162, 1331)
9,2110 (1385, 1043, 1153)

85022

S/048/60/024/010/031/033
B013/B063

AUTHORS: Strelets, P. L., Serova, I. A., Yatsenko, N. D., and Markus, P. L.

TITLE: Characteristics of the Technology and Properties of Some Piezoelectric Ceramic Materials

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960, Vol. 24, No. 10, pp. 1296 - 1299

TEXT: Production conditions of the following piezoelectric compounds were examined: 95%$BaTiO_3$-5%$CaTiO_3$-0.75%$CaCO_3$; 40%$BaNb_2O_6$-60%$PbNb_2O_6$; 55%$PbZrO_3$-45%$PbTiO_3$. The conventional ceramic process served as the basis, but it was varied for each new composition according to its specific properties. The solid $BaTiO_3$-$CaTiO_3$-$CaCO_3$ solution was synthesized directly from a mixture of corresponding salts and oxides at 1300°C. When selecting the burning conditions, one must take the prescribed temperature into account, since to exceed it would mean to

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Characteristics of the Technology and Properties of Some Piezoelectric Ceramic Materials

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deteriorate the piezoelectric and dielectric properties of the material concerned. The elements were polarized at a temperature near the Curie point (118°C) at a field strength of 0.8 kv mm^{-1} in the air or in an organosilicon liquid of the type "КАЛОРИЯ 2" (Kaloriya 2). The production process of $BaNb_2O_6$-$PbNb_2O_6$ is simpler than that of barium titanate. This solid solution was likewise directly synthesized from the corresponding salts and oxides by mixing and subsequent burning at 1000°C. Piezoelectric and dielectric properties of the elements are strongly influenced by the chemical composition of the niobium pentoxide used. Table 1 gives the properties of some specimens prepared with different impurity concentrations out of eight experimental sets of niobium pentoxide. The optimum values of the properties of piezoceramic elements can be held to be dependent upon a definite ratio of the impurities contained in niobium pentoxide. A great advantage of this new material is the fact that molded elements can be burned at relatively low temperatures (1260 ÷ 1280°C). Moreover, no specific medium is necessary in the final burning, due to a low thermal dissociation of lead

Characteristics of the Technology and Properties of Some Piezoelectric Ceramic Materials

metaniobate at 1000 ÷ 1300°C. The mentioned material polarized at 170 ÷ 180°C and 3 ÷ 5 kv mm^{-1}. The production process of the solid $PbZrO_3$-$PbTiO_3$ solution differs only little from the barium titanate synthesis. Nevertheless, due to a considerable volatility of lead oxide at over 1000°C, the process is not exempt from difficulties. Fig.1 gives the dependence of the volatility of lead oxide on temperature, on the duration of treatment, on the thickness and volume of the specimen. The study of the character of the lead oxide volatility has made it possible to calculate the excess quantum for production conditions in the practice, that must be added prior to the ultimate burning, in order to obtain piezoceramic elements of desired composition. Table 2 indicates Curie points of the examined compositions as compared with barium titanate. Fig.2 shows temperature dependences of the main parameters of the new materials and barium titanate. The course of the curves speaks in favor of the new piezoelectric materials. G. A. Smolenskiy is mentioned. The present paper was read at the Third Conference on

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85022

Characteristics of the Technology and Properties of Some Piezoelectric Ceramic Materials

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B013/B063

Piezoelectricity, which took place in Moscow from January 25 to 30, 1960. There are 2 figures, 2 tables, and 4 references: 2 Soviet and 1 Canadian.

Card 4/4

ACCESSION NR: AP4019340 S/0181/64/006/003/0790/0795

AUTHORS: Isupov, V. A.; Strelets, P. L.; Serova, I. A.; Yatsenko, N. D.; Shirobokikh, T. M.

TITLE: Peculiarities of ferroelectric phase transitions in solid solutions of the system $Na_{0.5}Bi_{0.5}TiO_3$ -- $PbTiO_3$

SOURCE: Fizika tverdogo tela, v. 6, no. 3, 1964, 790-795

TOPIC TAGS: ferroelectric, phase transition, solid solution, Vegard law, dielectric polarization, crystal lattice structure

ABSTRACT: The authors' study stems from lack of information on the effect of diffusion of phase transitions on ferroelectric properties and from disagreement concerning the causes of the relaxation nature of dielectric polarization observed in ferroelectrics with diffused phase transitions. While investigating the dielectric properties and crystal structure in the system $Na_{0.5}Bi_{0.5}TiO_3$--$PbTiO_3$, the authors discovered a number of relationships. Their studies confirm the view that the diffusion of ferroelectric phase transitions declines with

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ACCESSION NR: AP4019840

increase in spontaneous polarization and spontaneous deformation of the solid solutions. At room temperature, the boundary between rhombohedral and tetragonal phases lies in the region of 0-10% $PbTiO_3$. The dependence of unit-cell volume on component concentrations deviates considerably from the Vegard law. The Curie point of the examined solid solutions depends in nonlinear fashion on the concentration of $PbTiO_3$, reaching a minimum at a content of about 10 mol/% . Orig. art. has: 4 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 09Sep63	DATE ACQ: 31Mar64	ENCL: 00
SUB CODE: SS	NO REF SOV: 013	OTHER: 002

Card 2/2

L 7853-66 EWP(e)/EPA(s)-2/EWT(m)/EWP(i)/EPA(w)-2/EWP(t)/EWP(b)/EWA(h) IJP(c)
ACC NR: AP5028116 JD/WH SOURCE CODE: UR/0048/65/029/011/2042/2045

AUTHOR: Buyanova,Ye.A.; Strelets,P.L.; Serova,I.A.; Isupov,V.A.

ORG: none

TITLE: Ferroelectric properties of lead titanate - lead zirconate - lead nickel-niobate solid solutions /Report, Fourth All-Union Conference on Ferroelectricity held at Rostov-on-the Don 12-16 September 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 11, 1965, 2042-2045

TOPIC TAGS: ferroelectric material, solid solution, lead titanate, zirconate, niobate, nickel, dielectric constant, dielectric loss, piezoelectric modulus, elastic modulus, phase transition

ABSTRACT: The Curie points, dielectric constants, piezoelectric moduli, and elastic moduli of 13 solid solutions of the $PbTiO_3$ - $PbZrO_3$ - $Pb(NiNb_2)_{1/3}O_3$ system were measured in order to investigate the behavior of the system near the morphotropic phase boundary. The materials were synthesized from the oxides at 700-800°C for 2-3 hours and sintered at 1100-1160°C. The lead oxide loss and water absorption did not exceed 2% and 0.1%, respectively. X-ray studies showed all the materials to consist of a single phase with the perovskite structure. All the investigated specimens contained between 35 and 50 mole % $PbTiO_3$, between 25 and 55% $PbZrO_3$, and between 10 and 30% $Pb(NiNb_2)_{1/3}O_3$. The Curie temperature decreased monotonically with increasing

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ACC NR: AP5028116

$Pb(NiNb_2)_{1/3}O_3$ and $PbZrO_3$ content and showed no anomaly at the morphotropic phase boundary between the tetragonal and rhombohedric modifications. The elastic compliance, piezoelectric modulus, and dielectric constant showed broad maxima at the morphotropic phase boundary, but the dielectric loss varied monotonically. The failure of the dielectric loss to show a maximum at the phase transition is surprising, and an optical investigation of the behavior of the domain structure under the action of an electric field should be undertaken. The ratio of $PbTiO_3$ to $PbZrO_3$ concentrations at the morphotropic phase boundary decreased with increasing $Pb(NiNb_2)_{1/3}O_3$ content. This suggest that $Pb(NiNb_2)_{1/3}O_3$ is not tetragonal in the ferroelectric state and that a morphotropic phase boundary may be possible in the $PbTiO_3$ - $Pb(NiNb_2)_{1/3}O_3$ system. Some of the investigated solid solutions had rather large piezoelectric moduli, low sound velocities, and high stability of the resonance frequency, and these materials sintered at lower temperatures than the 47% $PbTiO_3$ - 53% $PbZrO_3$ solution. Orig. art. has: 2 figures and 1 table.

SUB CODE: SS,EM,ME SUBM DATE: 00/ ORIG. REF: 004 OTH REF: 003

Card 2/2

SEROVA, K.

My assumed obligation has been fulfilled. Svinovodstvo 13 no.11:25 N '59. (MIRA 13:2)

1. Sovkhoz "Yurinskiy," Gzhatskogo rayona, Smolenskoy oblasti. (Swine)

SEROVA, K.

Afforestation

There, where the forest will rustle
Vozhatyy 28 No. 6, June, 1952.

Monthly List of Russian Accessions, Library of Congress,
August, 1952. UNCLASSIFIED.

SEROVA, K.I.

Geography meeting on the subject "Study and exploitation of the Arctic." Geogr. v shkole 19 no.3:58-59 My-Je '56. (MLRA 9:9)

1.Shkola no.2 goroda Kamenska-Shakhtinskogo.
(Arctic regions) (Geography--Study and teaching)

KORSHAK, V.V.; FRUNZE, T.M.; KURASHEV, V.V.; SEROVA, K.L.

Heterochain polyamides. Part 28: Significance of acceptors of hydrochloric acid in the synthesis of polyamides by interfacial polycondensation. Vysokom. soed. 3 no.2:205-207 F '61. (MIRA 14:5)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Polyamides)

SEROVA, L.A.

Hemoculture method for the diagnosis of light forms of typhoid-paratyphoid. Sov.med. 21 no.11:81-83 N '57. (MIRA 11:3)

1. Iz kafedry infektsionnykh bolezney (zav.-kand.med.nauk L.D. Levina) Sverdlovskogo meditsinskogo instituta (dir.-prof. A.F. Zverev)

(SALMONELLA INFECTIONS, diag.
hemoculture)

SEROVA, L. A., Cand. Medic. Sci. (diss) "Clinical Features of Light Forms of Typhoid and Paratyphoid B," Sverdlovsk, 1958, 18 pp. (Sverdlovsk Med. Inst.) (KL Supp 12-61, 288).

SEROVA, L.A., assistent

Hemorrhagic form of paratyphoid b. Kaz.med.zhur. 40 no.5:118 S-O '59. (MIRA 13:7)

(PARATYPHOID FEVER)

SEROVA, L.A., kand.med.nauk

Outbreak of serous meningitis in Irbit. Sbor.rab.Sverd.med.inst. no.32:89-91 '61. (MIRA 16:2)

1. Iz kafedry infektsionnykh bolezney (zav. kafedroy - dotsent A.I.Kortev) Sverdlovskogo meditsinskogo instituta.
(IRBIT--MENINGITIS)

POTAPOV, V.M.; TERENT'YEV, A.P., SEROVA, L.I.

Stereochemical studies. Part 21: Dispersion of the optical rotation of 3-amino-3-phenylpropionitrile. Zhur. org. khim. 1 no.8:1444-1447 Ag '65. (MIRA 18:11)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

POTAPOV, V.M., TERENT'YEV, A.P., SERGEYA ...I.

Dispersion of the optical rotation of 2,2-dimenthyl-6-phenyl-4-piperidone. Dokl. AN SSSR 157 no. 2:420-422 Jl '64.
(MIRA 17:7)

1. Chlen-korrespondent AN SSSR (for Terent'yev).

KHOLMYANSKIY, M.M., kand.tekhn.nauk; KOL'NER, V.M., kand.tekhn.nauk;
SEROVA, L.P., inzh.

Differentiated designation of the minimum strength of concrete.
Bet. i zhel.-bet. no.1:12-16 Ja '62. (MIRA 15:4)
(Concrete--Testing)

KHOLMYANSKIY, M.M., kand.tekhn.nauk (Moskva); KOL'NER, V.M., kand.tekhn.nauk (Moskva); MICHURIN, V.F., inzh. (Moskva); SEROVA, L.P., inzh. (Moskva); TEVELEV, Yu.A., inzh. (Moskva)

Study of the action of transverse elements of large-panel apartment houses. Issl. po teor. sooruzh. no.14:169-184 '65.

(MIRA 18:10)

KHOLMYANSKIY, M.M., kand.tekhn.nauk; KOL'NER, V.M., kand.tekhn.nauk;
SEROVA, L.P., inzh.

Effect of some structural and technical factors on the bond of wire reinforcement with concrete. Sbor. trud. NIIZHelezobetona no.5:145-166 '61. (MIRA 16:3)
(Concrete reinforcement—Bond)

PICHUGIN, B.M.; SABEL'NIKOV, L.V.; BODRIN, V.V.; SOLODKIN, R.G.; KRUZHKOV, V.I.; SEROVA, L.V.; LYUBSKIY, M.S.; PUCHIK, Ye.P. [deceased]; KAMENSKIY, N.N.; YASHCHENKO, G.I.; GERCHIKOVA, I.N.; FEDOROV, B.A.; KARAVAYEV, A.P.; VINOGRADOV, V.M., red.; SHLENSKAYA, V.A., red.izd-va; VOLKOVA, Ye.D., tekhn.red.

[Commercial policy of European capitalist countries] Torgovo-politicheskii rezhim evropeiskikh kapitalisticheskikh stran. Moskva, Vneshtorgizdat, 1960. 234 p. (MIRA 14:2)

1. Moscow. Nauchno-issledovatel'skiy kon"yunkturnyy institut. (Europe, Western--Foreign trade regulation)

ACC NR: AT6036473 SOURCE CODE: UR/0000/66/000/000/0020/0021

AUTHOR: Aleksandryuk, S. P.; Anisimov, B. V.; Komarov, N. N.; Nefedov, Yu. G.; Potapov, A. N.; Sorova, L. V.; Tikhonova, G. P.

ORG: none

TITLE: Air ionization as a spaceflight factor [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24-27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 20-21

TOPIC TAGS: aeroionization, closed ecological system, life support system, human physiology, aeroion biologic effect, cosmic radiation biologic effect

ABSTRACT:

The physical and chemical properties of space cabin atmospheres may be changed by cosmic radiation, which produces ions and dissociated molecules with high (10 to 15 ev) potential energies. The latter have considerable chemical activity. A study was therefore made of the ionization of space cabin air. Radiation equivalent in intensity to average galactic radiation (0.3 ber) produced an atmospheric ion concentration of 10^5 mol/cm^3, which is easily reproduced under laboratory conditions.

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ACC NR: AT6036473

Data from the literature and our own experiments show that air ionization is an active factor causing definite changes in the state of the organism, particularly during stress or injury. Twenty-day experiments have shown that an appropriate air-ion regime can reduce the adverse effects on man of prolonged sojourns in sealed cabins. Single exposures of animals to ionized air caused changes in the resistance of peripheral blood erythrocytes to osmotic hemolysis and in the vital stain sorption properties, shifts in the metabolism of a number of physiologically active substances, changes in the ion permeability of the skin, and increased mitotic activity in the tissues. All these data confirm that even brief exposure to air ions in doses approaching those possible in a space cabin (1 to 5 10^5 ion/cm^3) has a definite effect on the organism.

Because air ionization is an unavoidable spaceflight factor having definite biological effects, its mechanisms of action must be studied further and ways found to realize energy recombination of ions in the living organism. [W. A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUB CODE: 00May66

Card 2/2

SEROVA, L.V.

Changes in the peripheral blood and medullary hemopoiesis in positive and negative aeroionization. Vop. kur., fizioter. i lech. fiz. kul't. 30 no.4:294-297 Jl-Ag '65. (MIRA 18:9)

1. Klimato-fiziologicheskaya laboratoriya (zav. N.M. Voronin) eksperimental'nogo otdela (zav. F.D. Vasilenko) TSentral'nogo instituta kurortologii i fizioterapii (dir. G.N. Pospelova), Moskva.

POTAPOV, I.S.; FINOGENOV, V.P.; SOLODKIN, R.G.; KAPELINSKIY, Yu.N.; MENZHINSKIY, Ye.A.; SEROVA, L.V.; POKROVSKIY, A.N.; PEVZNER, Ya.A.; LEBEDEV, B.I.; VLADIMIRSKIY, L.K.; MATYUKHIN, I.S.; ROGOV, V.V.; PISKOPPEL', F.G., doktor ekon. nauk, prof., red.; SHLENSKAYA, V.A., red.izd-va; ZINCHENKO, V.S., red.izd-va; PAVLOVSKIY, A.A., tekhn. red.

[Foreign trade of capitalist countries] Vneshniaia torgovlia kapitalisticheskikh stran. [By] I.S.Potapov i dr. Moskva, Vneshtorgizdat, 1963. 456 p. (MIRA 16:9)
(Commerce)

SEROVA, L.V.

Change in the indices of gas exchange in animals under the influence of a course of positive aerionization. Vop. kur., fizioter. i lech. fiz. kul't. 28 no.4:331-334 Jl-Ag '63. (MIRA 17:9)

1. Iz klimatofiziologicheskoy laboratorii (zav. N.M. Voronin), eksperimental'nogo otdela (zav. F.D. Vasilenko) TSentral'nogo instituta kurortologii i fizioterapii (dir. G.N. Pospelova).

L 13087-63 BDS/EWT(1)/ES(a)/ES(b)/ES(c)/ES(k) AFFTC Pb-4 A/DD
ACCESSION NR: AP3001504 S/0239/63/049/005/0639/0642

60
59

AUTHOR: Serova, L. V.

TITLE: Tissue resistance change during acclimatization of animals to moderate hypoxia under natural conditions

SOURCE: Fiziologicheskiy zhurnal SSSR, v, 49, no. 5, 1963, 639-642

TOPIC TAGS: tissue, resistance, acclimatization, hypoxia, sorption

ABSTRACT: Investigators have theorized that acclimatization of an organism to a specific condition produces non-specific reactions in addition to the specific reactions which together increase the non-specific resistance of the organism. The author poses the practical problem of whether it is possible to use such physiological adaptations to increase body resistance to injuries. Using tissue resistance change as an index of nonspecific resistance, a study of two groups of white rats under natural conditions was made. The first group was kept in a mountain pass at an altitude of 2200 m. above sea level for 3 mos. The second group was with the first group for 2 mos and then was moved for a month to a hydroelectric station at the same altitude where the water had a very fine spray (negative ions 19,000/cm sup 3 and positive ions 1,300/cm sup 3). Tissue

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ACCESSION NR: AP3001504

resistance to injurious agents was determined by vital straining. At the end of 3 mos the tissue sorption capacity of the first group was considerably lower than that of the control group. The tissue sorption capacity of the second group was even lower. Lowered tissue sorption capacity in acclimatizing to hypoxia indicates definite substance changes in the proteins which make tissues resistant to harmful agents. Increased tissue resistance taking place under moderate conditions can be considered not as a specific reaction, but as a separate nonspecific of the specific reactions accompanying prolonged acclimatization. Tissue resistance change may be a means of fixating new properties acquired by the organism in the adaptive process. Orig. art. has: 1 table.

ASSOCIATION: Klimato-fiziologicheskaya laboratoriya Tsentral'nogo instituta kurortologii i fizioterapii, Moscow (Climatic Physiology Laboratory of the Central Institute of Health Resorts and Physical Therapy)

SUBMITTED: 22Dec62 DATE ACQ: 12Jun63 ENCL: 00

SUB CODE: AM NO REF SOV: 016 OTHER: 001

Card 2/2

SEROVA, L.V.; FEDOTOVA, M.I.

Preventive action of aeroionization in acute radiation sickness.
Biul. eksp. biol. i med. 58 no.8:60-63 Ag '64.
(MIRA 18:3)

1. Submitted June 19, 1963.

L 04714-67

ACC NR: AP6027596 SOURCE CODE: UR/0248/66/000/008/0039/0044

AUTHOR: Serova, L. V. (Moscow)

26
B

ORG: none

TITLE: Tissue resistance changes of animals with inhalation of ionized air

SOURCE: AMN SSSR. Vestnik, no. 8, 1966, 39-44

TOPIC TAGS: mouse, rat, ionized air, negative ion, positive ion, biologic respiration, tissue physiology, colorimetric analysis

ABSTRACT: Tissue resistance changes of animals with inhalation of ionized air were investigated in a series of experiments staged on adult mongrel mice and male rats and on mice of the C57 bl line. Some experimental animal groups inhaled negatively or positively ionized air for a 24 hr period, and others inhaled negatively or positively ionized air for 20 min daily over a 30 day period. A unipolar electroeffluvial AIR-2 air ionizer was used to generate 2 to 3 times 10^5 ions/ml. Tissue resistance of the liver, spleen, kidney, heart and intestine were determined by sorption of neutral red measured with an FEK-M photoelectric colorimeter. Results show that with inhalation of

Card 1/2 UDC: 612.014.464.017.1

negatively ionized air for 24 hrs, the sorption activity of all vital organ tissues is reduced. But, the opposite is true with inhalation of positively ionized air for 24 hrs; the sorption activity of all vital organ tissues increases. With inhalation of negatively or positively ionized air for 20 min daily over a 30 day period, sorption activity is reduced in both cases showing that prolonged action modifies tissue resistance. Tissue resistance shifts appear to be related to changes of tissue protein properties. Orig. art. has: 3 tables.

SUB CODE: 06, 20/ SUBM DATE: 03Mar66/ ORIG REF: 019/ OTH REF: 007

KHOMYAKOV, Yu.S.; SEROVA, M.N.

X-ray examination of the gallbladder under polyclinical conditions.
Sov. med. 24 no. 10:135-137 O '60. (MIRA 13:12)

1. Iz kafedry rentgenologii radiologii (zav. - prof. V.A. D'yachenko) i rentgenovskogo otdeleniya (zav. M.N. Serova) polikliniki imeni N.A. Semashko (glavnyy vrach N.V. Sokolova).
(GALL BLADDER--RADIOGRAPHY)

SEROVA, M.Ya.

New data on the structure and development of the mouth in foraminifers of the species Hauerina (fam.Miliolidae). Biul.MOIP. Otd.geol. 28 no.2:62-64 '53. (MLRA 6:11)

(Foraminifera, Fossil)

SEROVA, M.Ya.; BONDAREVA, T.P.

Development of miliolites in the Paleogene period in the Turgay Gates. Biul.MOIP.Otd.geol.31 no.3:116-117 My-Je '56. (MLRA 9:12)
(Turgay Gates--Foraminifera, Fossil)

15-1957-10-13583

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 10, pp 18-19 (USSR)

AUTHORS: Bogdanov, A. A., Serova, M. Ya.

TITLE: The Stratigraphic Position of the Salt-Bearing Series in the Miocene Section of the Predkarpat'ye (Cis-Carpathians) (O stratigraficheskom polozhenii solenosnykh svit v razreze miotsena Predkarpat'ya)

PERIODICAL: Uch. zap. Mosk. un-t, 1956, Nr 176, pp 37-57

ABSTRACT: The stratigraphic position and the correlation of the saltbearing and gypseous series of the Miocene of the Predkarpatskiy regional downwarp are examined. In the type section of this area, the nature of the tectonic deformation and the historical development are divided into two zones, an inner and an outer. The Kosmachskaya series occurs at the base of the Miocene molasse of the downwarp. It consists of rhythmically alternating calcareous clays and sandstones, lying conformably on the rocks of the Menilitovaya (menilite) series. A layer of

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The Stratigraphic Position of the Salt-Bearing Series in the Miocene Section of the Predkarpat'ye (Cis-Carpathians)

puddingstone occurs on the southeast; on the northwest, the series consists of friable medium and coarse conglomerates. The series ranges in thickness from 80 to 400 m and is upper Oligocene-upper Miocene in age. Above it occurs the lower Miocene lower salt-bearing series. Saliferous clays with thick deposits of rock salt and potash salts occur at the base and at the top of this series in the northwestern part of the downwarp. The salt-bearing horizons are separated by sandstones with lenses of conglomerate (Truskavetskiye conglomerates). Saliferous clays and sandstones, 250 m thick and similar to the lower salt-bearing horizon, occur at the base of the series in the southeastern part of the downwarp. Above these occur bolder conglomerates (Slobodskiye), 600 m thick and similar to the Truskavetskiy conglomerates. The concluding series of beds, 600 m thick, is an alternating series of gray and greenish argillites, siltstones, and sandstones of the Dobrotovskiye beds. These latter are considered similar to the upper salt-bearing horizon. Foraminifers--Nonion boueanus, Asterigerina planorbis, and others--indicate that the series is Miocene. The middle Miocene

The Stratigraphic Position of the Salt-Bearing Series in the Miocene Section of the Predkarpat'ye (Cis-Carpathians)

lower Tortonian age, are here called the Nadvornyanskaya series. In the outer zone of the downwarp, the lower Tortonian is composed of medium and coarse-grained sands and sandstones with layers of clay, and is up to 500 m thick (Ugerskaya series). On the bordering Russian platform this series consists of sands, clays, marls, and limestones, with an abundant fauna: pectens and, of the foraminifers, lagenids, rotaliids, and elphidium. It is 20 to 60 m thick. The change in lithology and thickness is very sharp at the boundary between the downwarp and the platform. The upper Tortonian deposits are divided into two series, the lower consisting of lagoonal and lacustrine sediments and the upper of marine. The lagoonal and lacustrine deposits in the inner zone of the downwarp are saliferous and gypseous clays 80 to 100 m thick. At Kalush, where there are thick lenses of salt (the upper salt-bearing series), the thickness ranges up to 400 m. In the outer zone of the downwarp, the corresponding rocks are gypsum and anhydrite with layers of clay (the gypseous-anhydrite horizon) 5 to 15 m thick. Synchronous rocks on

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The Stratigraphic Position of the Salt-Bearing Series in the Miocene Section of the Predkarpat'ye (Cis-Carpathians)

and marls, with numerous fossils. The Buglovskiy horizon is differentiated in the upper part of the sequence. The remaining part of the upper Tortonian of the platform corresponds to horizon P_{III} of the Pokutskaya series of the downwarp. The top of the Miocene molasse of the downwarp is comprised of lower Sarmatian clays with layers of sands and sandstones up to 300 m thick. Two horizons are distinguished: Miliolina (Miliolina reussi and M. predcarpatica) and Nonion (Nonion subgranosus and Elphidium regina). A Miocene section from the Kalush region is shown which has duplication because of overthrusting. The salt-bearing beds of Kalush belong to the lower part of the upper Tortonian (the upper salt-bearing series).

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V. A. Krasheninnikov

SEROVA, M.Ya.

Ontogenic and phylogenic development of the genus Hauerina. Vop. mikropaleont. no.3:22-30 '60. (MIRA 13:9)

1. Geologicheskiy institut Akademii nauk SSSR.
(Podolia--Foraminifera, Fossil)

SEROVA, M.Ya.

Miliolids from Paleogene deposits of the Aral -Turgay Lowland.
Vop.mikropaleont. no.3:83-131 '60. (MIRA 13:9)

1. Geologicheskiy institut Akademii nauk SSSR.
(Aral Sea region--Foraminifera, Fossil)
(Turgay Gates--Foraminifera, Fossil)

SEROVA, M. YA

Papers submitted for the 10th Pacfic Science Congress, Honolulu, Hawaii 21 Aug-6 Sep 1961.

NAGIBINA, M. S., Institute of Geology - "Mesozoic depressions and troughs of east Asiatic type and their position in the systematics of tectonic forms" (Section VII.C)

NELEPO, B. A., Moscow State University, Physical Faculty - "The gamma-ray spectrometric measurements of artificial radioactivity in upper layers of the ocean" (Section VII.B.6)

NESTEROV, V. G., Chair of Forestry, The Agricultural Academy imeni K. A. Timiryazev - "Forest fire research and methods of fire control" (Section V.B)

OSTROUMOVA, T. A., Institute of Oceanology - "Biogeographical and morphological analysis of reproduction and development of flatfish in the seas of the northwest Pacific" (Section III.C)

OZMIDOV, R. V., Institute of Oceanology - "Investigation of the horizontal turbulent exchange in the Pacific Ocean" (Section VII.B)

PARIN, N. V., Institute of Oceanology - "Regularities in the geographical distribution of flying fishes in the Pacific Ocean" (Section VII.C)

PERGAMENT, M. A., Institute of Geology - "Stratigraphic horizons in the cretaceous deposits of Kamchatka" (Section VII.C)

PETELIN, V. P., Institute of Oceanology - "The processes of recent sedimentation in the western part of the equatorial zone in the Pacific" (Section VII.C.1)

PETRUSHEVSKIY, B. A., Institute of Earth Physics imeni O. Yu. Schmidt - "The seismic geological conditions in the northwestern outlying area of the Pacific basin" (Section VII.C.2)

PONOMAREVA, L. A., Institute of Oceanology - "Euphausiidae in the northern part of the Pacific" (Section III.C)

PORTENKO, L. A., Institute of Zoology - "The problem of the Bering land bridge from the ecological point of view" (Section III.A.3.a)

PUSHCHAROVSKIY, Yu. M., Institute of Geology - "Some specific features in the tectonics of the north part of the Pacific belt" (Section VII.C)

PYSKIN, Yu. R., Moscow State University, Physical Faculty - "A new deep-sea device for recording currents ('HDU')" (Section VII.B.5)

RADKEVICH, Ye. A., Institute of Geology - "On the stability and inheritance of structural elements in the frame of the Pacific Ocean depression" (Section VII.C)

RASS, T. S., OSTROUMOVA, T. A., and GORSHKOVA, N. N., Institute of Oceanology - "Geographical regularities in regard to reproduction and development of mass fishes in the northern part of the Pacific" (Section III.C)

ROMANKEVICH, Ye. A., Institute of Oceanology - "Organic substance in bottom sediments in the western part of the Pacific" (Section VII.C.1)

RUDICH, Ye. M., Institute of Earth Physics imeni O. Yu. Schmidt - "Relations between deep focus earthquakes in the eastern margin of Asia and large structures of the earth crust" (Section VII.C.2)

RYABCHIKOV, A. M., Moscow State University, Geographical Faculty - "The structure of natural zonatic in east Asia" (Section VI.C)

RYKUNOV, L. N., Moscow State University, Physical Faculty, Chair of Hard Crust - "The correlative method for studying microseism" (Section VII.C.2)

SAIDOVA, Kh. M., Institute of Oceanology - "The distribution of bottom lime Foraminifera in the northern part of the Pacific and its use for the reshaping of the paleorelief" (Section VII.C.1)

SAMOYLENKO, V. S., Institute of Oceanology - "Problems concerned with the theory of formation of the temperature regime in seas and oceans" (Section VII.A)

SEMINA, G. I., Institute of Oceanology - "Biogeographical zonation of the Pacific Ocean in regard to phytoplankton" (Section III.A)

SEROVA, M. Ya., Institute of Geology - "Paleogene Foraminifera of Kamchatka" (Section VII.C)

SAVILOV A I

SAVILOV, A. I., Institute of Oceanology - "Velella and Physalia in the pleiston of the Pacific" (Section III.C)

SHEYNMANN, Yu. M., Institute of Earth Physics imeni O. Yu. Schmidt - "Mechanism of ocean-magmas (?) origin" (Section VII.C.2)

SHOSHIN, A. A., The Central Organization of Leningrad - "The main problems of human illness geography and their significance for prophylactic medicine" (Section VII.B.4)

SHUMSKIY, P. A., Institute of Permafrost Studies - "Glaciology of Antarctica" (Section VII.D.1)

SYSOYEV, N. N., Institute of Oceanology - "Methods for measuring deep currents in the ocean and some results of their application in the Pacific Ocean" (Section VII.B.5)

SEROVA, M.Ya.

The new late Tortonian genus Podolia (Miliolidae) from the western Ukraine. Paleont.zhur. no.1:56-60 '61. (MIRA 14:8)

1. Geologicheskiy institut AN SSSR.
(Ukraine--Foraminifera, Fossil)

SEROVA, M.Ya.

The species Trochammina vitrea Serova, sp.nov., its paleoecology and stratigraphic significance. Vop. mikropaleont no.5:69-82 '61. (MIRA 14:8)

1. Geologicheskiy institut AN SSSR.
(Kamchatka--Foraminifera, Fossil)

SEROVA, M.Ya.

Taxonomic significance of some specific features of the wall microstructure and chamber structure in milioline shells. Vop. mikropaleont. no.5:128-134 '61. (MIRA 14:8)

1. Geologicheskiy institut AN SSSR.
(Foraminifera, Fossil)

SEROVA, M.Ya.

Significance of some morphological characteristics of the genus Cyclammina for taxonomy as revealed by a study of Cyclammina cancellata Brady. Vop. mikropaleont. no.8:13-29 '64.
(MIRA 18:5)

1. Geologicheskiy institut AN SSSR.

USSR/Chemistry - Pharmaceuticals, Alkaloids — Jan 53

"Stereoisomeric Transformations in the Heliotridane Series," A. C. Labenskiy, N. A. Serova, and G. P. Men'shikov, All-Union Sci-Res Chemicopharmaceut Inst im S. Ordzhonikidze

DAN SSSR, Vol 88, No 3, pp 467-470

Two diasteromeric amino acids were prepd from oxidation of isoretonicalonic acid and from lindelofidine having identical properties except for opposing specific rotations. This isomerization

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makes it possible to prepare pseudo-heliotridane from heliotridane. Presented by Acad V. M. Rodionov 24 Nov 52.

KORNEYEVA, A.A.; SEROVA, N.A.; KROPACHEVA, V.A. (Moskva)

Effectiveness of using chlorophos in controlling bedbugs.
Fel'd. i akush. 27 no.4:51-52 Ap '62. (MIRA 15:6)
(BEDBUGS--EXTERMINATION)
(CHLOROPHOS)

AUTHORS: Serova, M. A., Madayeva, O. S. SOV/79-28-7-60/64

TITLE: Steroid Sapogenins (Steroidnyye sapogeniny) V. Sapogenins of the Leaves of Agave americana L. (V. Sapogeniny list'yev Agave americana L)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 7, pp 1991 - 1993 (USSR)

ABSTRACT: In the investigation of the plants of the Soviet flora with respect to the saponins contained in them the authors were especially interested in the known kinds of plants in which alkaloids had already been found. The conditions of climate, place and soil play a role as concerns the nature of the steroid alkaloids, as had already been mentioned earlier by the authors (Refs 1,2). The Yucca filamentosa, e.g., grows at the same time at the borders of the Black Sea and in South Carolina. In the Russian plant sarsasapogenin, gitogenin and gecogenin (Ref 5) were found. The present paper deals with the composition of the sapogenins of the leaves of the Agave americana L. which is grown at the Caucasus border of the Black Sea. Marker (Marker)

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Steroid Sapogenins. V. Sapogenins of the Leaves of Agave americana L. SOV/79-28-7-6o/64

(Ref 6) separated gecogenin (0,4%) from the leaves of this species, which was also separated from these leaves collected in the South of France by a French scientist. The authors extracted the saponins with water and butanol (2:3). In the defattening of the aqueous solutions and the further extraction of the sapogenins according to the acid hydrolysis as well as according to the alkaline saponification they used xylene. The separation of the technical sapogenins was carried out by means of paper chromatography. The result showed that the leaves of the Agave americana L. contain 0,2% gecogenin with small admixtures of rocogenin. There are 11 references, 2 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze (All-Union Scientific Chemical and Pharmaceutical Research Institute imeni S.Ordzhonikidze)

SUBMITTED: May 25, 1957

Card 2/3

MADAYEVA, O.S.; SEROVA, N.A.; CHETVERIKOVA, L.S.; SHEYNKER, Yu.N.; KICHENKO, V.I.

Investigation of some saponin-bearing plants for their content steroid saponin. Trudy VILAR no. 11:229-236 '59. (MIRA 14:2)
(SAPONINS) (BOTANY, MEDICAL)

AUTHORS: Serova, N. A., Utkin, L. M. SOV/79-29-1-71/74

TITLE: On Sapogenin in the Roots of the Patrinia Plant (O sapogenine korney patrinii)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 1, pp 336-338 (USSR)

ABSTRACT: On the search for plants with steroid compounds the authors were interested in the plant Patrinia intermedia Roem. et Schult. A. M. Sokol'skaya (Ref 1) found that its saponin content is rather high. The sapogenin obtained from the latter was therefore regarded to be steroid and a little substantiated structure formula was suggested. Since several data in the paper mentioned were doubtful this plant was once more investigated. Two root samples of the plant collected in different regions of the USSR delivered exactly the same results of investigation. Saponin was obtained by treatment of the roots with methanol and by precipitation from the methanol extract with ether. The yield corresponded to that found by Sokol'skaya. In the case of hydrolysis of saponin in heating with diluted sulfuric acid the result was sapogenin which formed a difficultly soluble sodium salt which refers to its acid character. Sapogenin which is separated from the sodium salt

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has the composition $C_{30}H_{48}O_3$. Its properties as well as those of its derivatives correspond to those of oleanolic acid and its derivatives. The infrared absorption spectra of the crystalline sapogenin acetate and of the acetate of oleanolic acid are in complete agreement. The method applied by the authors to the plants was the same method as employed by Sokol'skaya. Also the yields in sapogenin agreed quite well although the purification was carried out by means of sodium salt. This is why the authors tend to assume that sapogenin as obtained Sokol'skaya was no sapogenin but oleanolic acid. This is also confirmed by the analyses data of the paper mentioned (Ref 1) which do better correspond to formula $C_{30}H_{48}O_3$ than to the formula given by the author: $C_{21}H_{32}O_2$. There are 4 references, 1 of which is Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze (All-Union Scientific Chemo-Pharmaceutical Research Institute imeni S. Ordzhonikidze)

SUBMITTED: November 25, 1957

SEROVA, N.A.

Sapogenic Eryngium incognitum roots. Med. prom. 15 no.11:26-27 N '61. (MIRA 15:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze.
(SAPONINS) (AMMIACEAE)

Category: USSR / Diseases of Farm Animals. Diseases of Undetermined Etiology V-4

Abs Jour: Refer. Zhur-Biologiya, No 16, 1957, 72331

Author : Serov V. M., Serova N. M.
Inst : Not given
Title : The Problem of Bursitis in Northern Deer

Orig Pub: Tr. N. I. In-ta S.-Kh. Krayn. Severa, 1956, 3, 108-111

Abstract: In the Extreme North an acute disease with symptoms of bursitis in the northern deer, which was found mainly in adult animals during the spring was observed. During the summer and autumn chronic forms of the disease were observed. The clinical illness in its initial stage was manifested by damage in the bursa, most frequently found in the region of the carpal joints in the form of a spherical swelling of moderate size, which was painful, hard and hot. In chronic cases the swelling increased, the pain lessened. Sometimes orchitis, epididimitis, and mastitis were noted. The studh of the blood in the sick deer with tests for brucellosis agglutination gave positive results. No bacteriological studies were done.

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